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ABSTRACT

In 1996, the Environmental Education Council of Ohio (EECO) took the lead in developing a statewide plan to build Ohio's capacity--or Ohio's ability to provide leadership and resources--for environmental education. The goal for the project was to collaboratively develop and implement a statewide strategy for building Ohio's ability to promote reform-based environmental education that is interdisciplinary, community-based, and learner-centered. This document presents the plan to bring these goals to fruition. Topics include: (1) Coordinated Leadership, featuring a statewide environmental education steering committee, an environmental education center, and a staff that will coordinate communication, networking, and program development among groups to provide planning and outreach for educators; (2) Guidelines for Best Practices, providing an outline of the best practices in Ohio's environmental education programs based on proven methods and research findings; (3) Outreach, discussing promotion of environmental education in Ohio and centralized access to environmental information and education resources; (4) Training and Professional Development, providing programs to assist people in becoming effective environmental educators; (5) Diversity, developing programs, services, and facilities that will be accessible and affordable to diverse audiences in Ohio; (6) Support, coordinating a unified, active constituency that will build bipartisan political support for environmental education; and (7) Funding, maintaining and developing sustainable funding sources. Contains 13 references. (CCM)

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ED 430 823

Ohio EE 2000

A Strategic Plan for Environmental Education In Ohio

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Environmental Education Council of Ohio • Ohio Alliance for the Environment • Ohio Department of Education • Ohio Department of Natural Resources • Ohio Environmental Protection Agency • Science and Mathematics Network

This project was made possible, in part, through grants from the U.S. Environmental Protection Agency and the Ohio Environmental Protection Agency.

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Ohio EE 2000

A Strategic Plan for Environmental Education In Ohio

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This project was made possible, in part, through grants from the U.S. Environmental Protection Agency and the Ohio Environmental Protection Agency.

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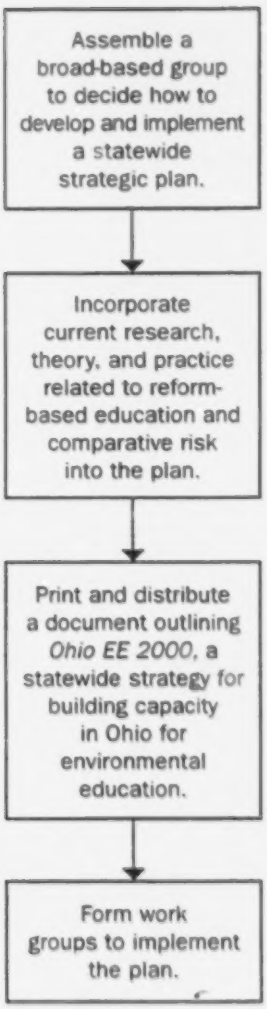
Executive Summary


Assemble a broad-based group to decide how to develop and implement a statewide strategic plan.
Incorporate current research, theory, and practice related to reform-based education and comparative risk into the plan.
Print and distribute a document outlining *Ohio EE 2000*, a statewide strategy for building capacity in Ohio for environmental education.
Form work groups to implement the plan.

In 1996, the Environmental Education Council of Ohio (EECO) took the lead in developing a statewide plan to build Ohio's capacity, or Ohio's ability to provide leadership and resources, for environmental education. EECO was joined by other interested parties including the Ohio Alliance for the Environment, the Ohio Department of Natural Resources, the Ohio Department of Education, the Ohio Environmental Protection Agency, and the Science and Mathematics Network.

The goal for the project was to collaboratively develop and implement a statewide strategy for building Ohio's ability to promote reform-based environmental education that is interdisciplinary, community-based, and learner-centered. Specific objectives were to:

- Assemble a broad-based group to decide how to develop and implement a statewide strategic plan.
- Incorporate current research, theory, and practice related to reform-based education and comparative risk into the plan.
- Print and distribute a document outlining *Ohio EE 2000*, a statewide strategy for building capacity in Ohio for environmental education.
- Form work groups to implement the plan.

The intent was to develop a plan specific enough to result in tangible progress, yet broad enough to meet the diverse needs of the plan's targeted audiences—its stakeholders. Stakeholders include the **beneficiaries** who will learn as a result of the implementation of the plan, the **educators** who will implement the educational programs and initiatives outlined in the plan, and the **supporters** who will assist in a variety of ways.

With this array of stakeholders involved, it is important to recognize that different perspectives on environmental education exist. The intent of this plan is to honor these perspectives and provide a means to enhance environmental education for all. With this in mind, the developers of the plan believe that stakeholders need to develop their own definition of environmental education, along with a mission and vision, to meet their individual needs.

The most important aspect of the process was the formation of a large and diverse Strategic Planning Team which met twice, once at a two-day retreat and the other at a one-day follow-up meeting. During an intense planning experience, this group created the major directions found in this document, which were fine-tuned into objectives by the Guidance Team. This became a first draft of the strategic plan which was then broadly distributed to thousands of people around Ohio. Feedback on the first draft was used by the Strategic Planning Team to create a second draft. The second draft also was broadly distributed with a survey form for feedback.

Many of the comments received from the review of the second draft related to the implementation of the plan and will be passed along to the Steering Committee, the Ohio Environmental Education Center, and people working on implementing various aspects of the plan. Other comments were incorporated into this plan. In this review, very strong support was expressed for the objectives and action items found in this plan.

This document outlines a strategic plan for environmental education in Ohio. It is the written product of the Ohio EE 2000 project. It includes objectives, action items, and points to consider in implementation. Work groups, individuals, organizations, and agencies will be invited to provide leadership in implementing the plan.

As a result of the Ohio EE 2000 planning process, the Strategic Planning Team identified seven broad objectives and accompanying action items to provide a framework for environmental education in Ohio. These objectives address key areas that will help support environmental education initiatives. The areas are interrelated and interconnected, weaving a synergy that will move environmental education forward, building upon a rich past with a vision of an even greater future.

The key areas and the Ohio EE 2000 objectives to address them are:

1. **Coordinated leadership.** A statewide environmental education steering committee, an environmental education center, and the center's staff will coordinate communication, networking, and program development among groups to provide planning and outreach for educators.

2. **Guidelines for best practices.** Guidelines will be developed outlining best practices in Ohio's environmental education programs, based on proven methods and research findings.

3. **Outreach.** A marketing plan will be developed to promote environmental education in Ohio and centralized access to environmental information and education resources.

4. **Training and professional development.** Programs to assist people in becoming effective environmental educators will be put in place.

5. **Diversity.** Programs, services, and facilities will be accessible and affordable to diverse audiences in Ohio.

6. **Support.** A unified, active constituency will build bipartisan political support for environmental education.

7. **Funding.** Sustainable funding sources will be developed and maintained.

A Transition Team representing diverse interests has been named to oversee the formation of the Steering Committee to implement the Ohio EE 2000 plan. The work of the implementation of this plan now belongs to the citizens of Ohio, under the leadership of the Steering Committee. The plan will be evaluated as to its implementation and effectiveness in the year 2005.

Introduction

Ohio carries a strong tradition for providing statewide efforts to educate its citizens about natural and built environments. Rooted in the conservation education movement of the 1930s and '40s, and continuing with a push for outdoor and environmental education in the decades that followed, state agencies and nonprofit organizations in Ohio have long collaborated to improve educational efforts.

This tradition continued in 1996 when the Environmental Education Council of Ohio (EECO) took the lead in developing a statewide plan to build Ohio's capacity, or Ohio's ability to provide leadership and resources, for environmental education. EECO was joined by several other state agencies and organizations—a collaboration that grew out of the recognition that individually and collectively, these groups have accomplished much over the years, and they are committed to continuing their environmental education work together.

Rationale

Ohio's environmental education efforts parallel those in other states. Yet, after all these years, the National Environmental Report Card (NEETF/Roper, 1997) provides mixed results about the success of these efforts. The report card assessed Americans' environmental knowledge, attitudes, and behaviors. On the down side, two out of three survey respondents (68 percent) failed to correctly answer nine or more of twelve simple questions on the environment. For example, only 23 percent identified runoff as the leading cause of water pollution, and only 33 percent identified fossil fuels as our primary method for generating electricity. On the positive side, many adults were knowledgeable about some environmental issues, e.g., that most garbage ends up in landfills (83 percent), species loss is due to habitat destruction (73 percent), and vehicles are the leading cause of air pollution (69 percent). The report suggests that a lack of public environmental knowledge can impede policy-makers' ability to address some of our most complex environmental problems and to involve individuals in citizen action.

At the same time, Americans remain highly supportive of the environment and environmental education. Based on data collected by the Roper group over the last six years, support for environmental protection and regulation has remained high and constant, and adults believe that the environment and economy can go hand-in-hand. In terms of environmental education, fully 95 percent of adult Americans and 96 percent of parents support children being taught environmental education in schools. The report also supports the need for adult environmental education. It indicates that while many hold the popular belief that children teach their parents about the environment, adults with children have no more environmental knowledge than adults without children.

This support of and need for environmental education also is evident in Ohio. Ohioans recognize that environmental education can provide them with

the knowledge and commitment to make informed and responsible decisions regarding individual behavior and public policy. A public opinion survey conducted for the Ohio Comparative Risk Project demonstrated that the general public in Ohio believes that environmental threats to the quality of life in Ohio are serious (Ohio EPA, 1995). Ohio environmental professionals are most concerned about the links between human health and the environment as well as the prospects for future generations. In addition, they believe in the importance of the environment to their quality of life and are willing to learn to live in ways that minimize the impact of their actions on the environment.

Grassroots efforts for environmental education, combined with statewide planning, have previously resulted in improving coordination among Ohioans working to enhance environmental literacy and educational efforts. Yet, the above survey results indicate the need for an even greater initiative.

While Ohio has been rich in the program arena, especially with funding made available through the Ohio Environmental Education Fund (OEEF), administered by the Ohio EPA, it has lacked formalized collaborative leadership and programmatic infrastructures. Many outstanding programs are offered around the state and some of what is in this plan is already occurring. A major goal of this plan is to better coordinate and support grassroots efforts in environmental education in Ohio. This will enhance the quality and delivery of environmental education and significantly increase its impact in Ohio.

The Collaborative Initiative

in part as a response to its own strategic planning and in part due to the need to provide communication and coordination among those promoting environmental education in the state, EECO opened discussion in 1996 on the development of a statewide plan to improve Ohio's ability to provide environmental education to all its citizens. EECO was joined by other interested parties including the Ohio Alliance for the Environment, the Ohio Department of Natural Resources, the Ohio Department of Education, the Ohio Environmental Protection Agency, and the Science and Mathematics Network. This initiative mirrored efforts going on around the United States to increase the ability of states to provide coordinated leadership and improve delivery of environmental education.

Together, these statewide organizations sought funds to conduct a strategic planning process for environmental education in Ohio. In September 1997, $25,000 was granted from U.S. EPA Region V, Office of Environmental Education, to support this effort. In addition, the Ohio EPA, through the Ohio Environmental Education Fund, provided a $10,000 grant.

The goal for the project was to collaboratively develop and implement a statewide strategy for building Ohio's ability to promote reform-based environmental education that is interdisciplinary, community-based, and learner-centered. Specific objectives were to:

- Assemble a broad-based group to decide how to develop and implement a statewide strategic plan.
- Incorporate current research, theory, and practice related to reform-based education and comparative risk into the plan.
- Print and distribute a document outlining *Ohio EE 2000*, a statewide strategy for building capacity in Ohio for environmental education.
- Form work groups to implement the plan.

Stakeholders

The intent was to develop a plan specific enough to result in tangible progress, yet broad enough to meet the diverse needs of the plan's targeted audiences—its stakeholders. Stakeholders include the **beneficiaries** who will learn as a result of the implementation of the plan, the **educators** who will implement the educational programs and initiatives outlined in the plan, and the **supporters** who will assist in a variety of ways. The following identifies some of the stakeholders who will be involved.

Beneficiaries

All Ohio citizens including:

- Prekindergarten to twelfth-grade learners.
- College and university learners.
- Adult learners.

Educators

Educators from formal education organizations such as:

- Public/private schools (PreK-12).
- State and private universities and colleges.

Educators from nonformal education organizations such as:

- Parks, zoos, museums.
- Nature and EE centers.
- Soil and water conservation districts.
- Local, regional, and state governmental agencies.
- Business and industry.
- Environmental organizations.
- Community-based groups.

Supporters

- Business community.
- Agricultural community.
- Community-based groups.
- Environmental organizations.
- State and federal agencies.
- Education organizations.
- Religious groups.
- Legal groups.

Definition of Environmental Education

With this array of stakeholders involved, it is important to recognize that different perspectives on environmental education exist. The intent of this plan is to honor these perspectives and provide a means to enhance environmental education for all. With this in mind, the developers of the plan believe that stakeholders need to develop their own definition of environmental education, along with a mission and vision, to meet their individual needs. However, among all these differences, common perspectives exist. The following definition for environmental education captures many of our shared ideas:

> *Environmental education is a process involving life-long learning as we come to understand the complexity of our natural world and environmental issues, using various approaches for individual and societal decision-making based on knowledge integrated from various disciplines, and resulting in our own attitudes and action strategies to "make a difference" in the world.* (See Appendix A for a scholarly definition.)

Based upon the acceptance of our differences and the strength of our common ground, EECO acted as the facilitator of a broad-based planning process to develop a comprehensive strategy to build state and local ability for developing environmental literacy for all Ohioans.

Overview of the Process

To oversee the process and keep it on track, a **Guidance Team** was formed that represented a broad base of interests (see Acknowledgements). The Guidance Team appointed a **Coordinating Team** to provide leadership between Guidance Team meetings.

The most important aspect of the process was the formation of a large and diverse **Strategic Planning Team** (see Acknowledgements) which met twice, once at a two-day retreat and the other at a one-day follow-up meeting. During an intense planning experience, this group created the major directions found in this document, which were fine-tuned into objectives by the **Guidance Team**. This became a first draft of the strategic plan which was then broadly distributed to thousands of people around Ohio.

Feedback on the first draft was used by the **Strategic Planning Team** to create a final draft. A professional editor assisted the **Guidance Team** in preparing the draft for distribution around the state. The **Guidance Team** analyzed feedback to prepare for the final plan.

This document outlines the completed strategic plan for environmental education in Ohio as developed by the Ohio EE 2000 project. It includes objectives, action items, and points to consider in implementation. Work groups, individuals, organizations, and agencies will be invited to provide leadership in implementing the plan. It is hoped that the results of Ohio EE 2000 will be far-reaching and will impact Ohio and its citizens for years to come.

///// OHIO EE 2000 OBJECTIVES AND ACTIONS

Introduction

As a result of the Ohio EE 2000 planning process, the Strategic Planning Team identified seven broad objectives and accompanying action items to provide a framework for environmental education in Ohio. These objectives address key areas that will help support environmental education initiatives. The areas are interrelated and interconnected, weaving a synergy that will move environmental education forward, building upon a rich past with a vision of an even greater future.

The key areas and the Ohio EE 2000 objectives to address them are:

KEY AREA 1: Coordinated leadership

OBJECTIVE: A statewide environmental education steering committee, an environmental education center, and the center's staff will coordinate communication, networking, and program development among groups, both local and statewide, to provide planning and outreach for educators of youth and adults.

KEY AREA 2: Guidelines for best practices

OBJECTIVE: Guidelines will be developed outlining best practices in Ohio's environmental education programs, based on proven methods and research findings.

KEY AREA 3: Outreach

OBJECTIVE: A marketing plan will be developed to promote environmental education in Ohio and centralized access to environmental information and education resources.

KEY AREA 4: Training and professional development

OBJECTIVE: Programs to assist people in becoming effective environmental educators will be put in place.

KEY AREA 5: Diversity

OBJECTIVE: Programs, services, and facilities will be accessible and affordable to diverse audiences in Ohio.

KEY AREA 6: Support

OBJECTIVE: A unified, active constituency will build bipartisan political support for environmental education.

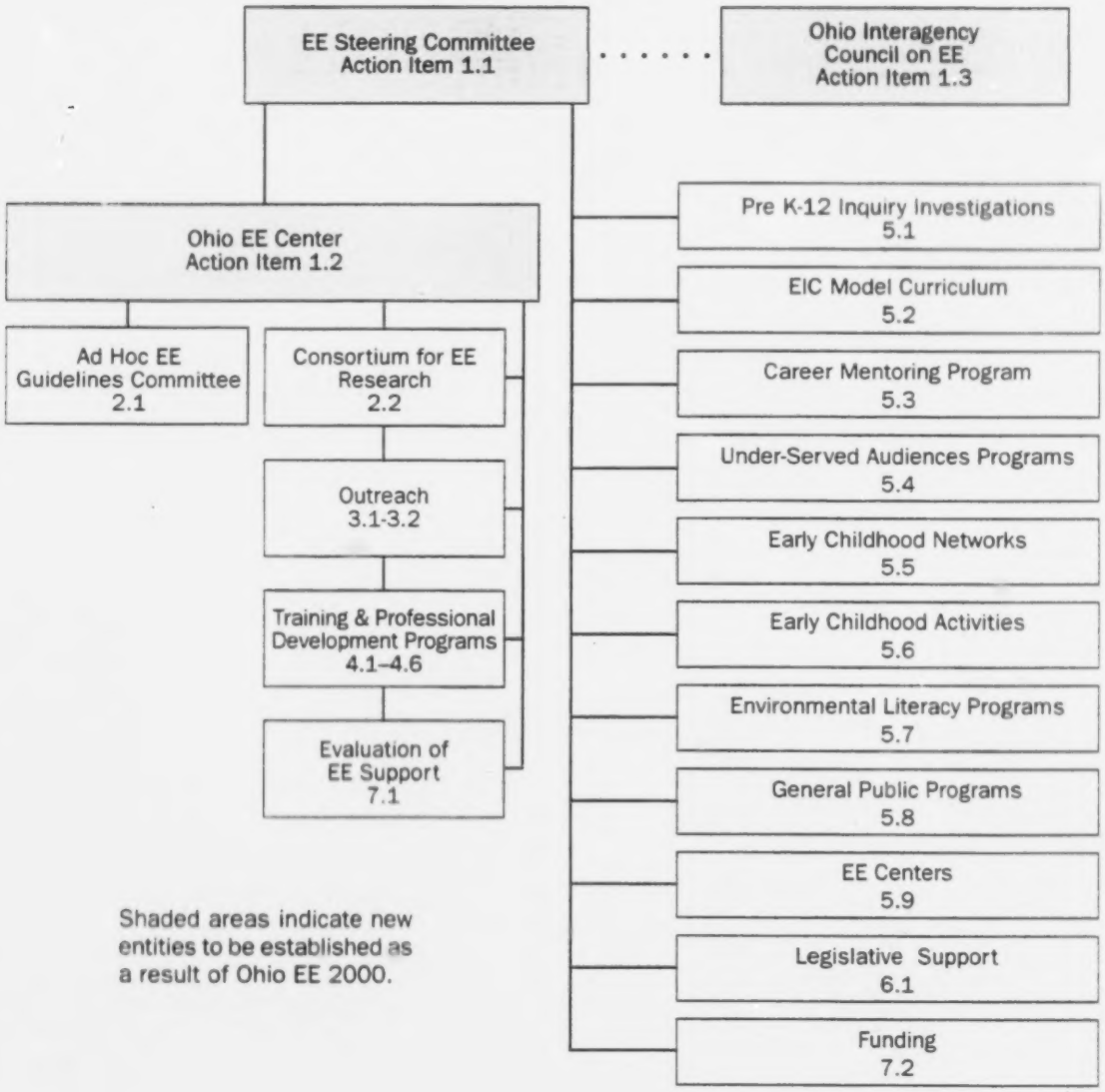
KEY AREA 7: Funding

OBJECTIVE: Sustainable funding sources will be developed and maintained.

Ohio EE 2000 Organizational Structure, page 11, illustrates the organizational structure for Ohio EE 2000. The figure illustrates the three new entities that will be established as a result of EE 2000 and indicates which objectives will be associated with each organization, as well as the interrelationship among the objectives and action items. Appendix B provides a more detailed explanation for this structure.

Ohio EE 2000 Objectives and Action Items, pages 12-24, lists action items for each of the seven objectives, along with a general description and important points to consider in implementing the action item. These descriptions and important points are not intended to be comprehensive nor prescriptive, but are provided to help clarify the intent of the action item and to capture key ideas contributed during the review process.

///// Ohio EE 2000 Organizational Structure



Shaded areas indicate new entities to be established as a result of Ohio EE 2000.

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///// Ohio EE 2000 Objectives and Action Items

KEY AREA 1: Coordinated leadership

Objective 1: A statewide environmental education steering committee, an environmental education center, and the center's staff will coordinate communication, networking, and program development among groups, both local and statewide, to provide planning and outreach for educators of youth and adults.

Action Item ▶ **1.1 Establish a statewide EE steering committee.**

Description	Important Points to Consider
The Ohio EE 2000 Transition Team will establish a statewide **Environmental Education Steering Committee**, made up of diverse stakeholders, to oversee the implementation of the Ohio EE 2000 Plan. The committee will provide leadership and guidance on the formation, policies, responsibilities, and evaluation of an environmental education center; initiate and provide oversight for selected programs identified in the Ohio EE 2000 Plan; and create a conduit for information flow.	• Use the Ohio EE 2000 Transition Team to develop bylaws (e.g., composition, replacement procedures, terms of office, terms of commitment). • Involve stakeholders in the selection of the Steering Committee. • Use a memorandum of understanding among stakeholder groups to establish the Steering Committee. • Assure that the Steering Committee has diverse membership, including representatives from industry and local organizations. • Include a "seat" on the Steering Committee for a legislator in a key committee position. • Have a rotating chair for the Steering Committee.

Action Item ▶ **1.2 Establish an independent center for environmental education in Ohio.**

Description	Important Points to Consider
The **Steering Committee** will establish an independent **Ohio Environmental Education Center**. The concept behind the center is a function more than a place. It will include a position of director and will be funded by multiple sources. The center will support the work of all agencies and environmental education groups, and will promote collaboration, networking, information exchange, and program development.	• Be sure the center has the support and funding to be effective. • Hire a director for the center who knows about both grassroots environmental education programs and public relations. • Use memoranda of understanding among diverse groups to advance the collaborative efforts of the center.

Action Item ▶ **1.3 Establish environmental education positions in key state agencies and re-institute the Ohio Interagency Council on Environmental Education.**

Description

Appropriate state agencies each will have at least one staff position responsible for coordinating environmental education efforts in the agency. The **Steering Committee** will call these staff members together to re-institute the Ohio Interagency Council on Environmental Education. The council's charge will be to help agencies exchange information about current issues, programs, and services. In addition, it will promote cooperation among state agencies as well as with local government. One member of the council will hold a seat on the Environmental Education Steering Committee.

Important Points to Consider

- When designing the council, look at some models being used by existing groups (e.g., Ohio Science and Technology Council, the Interagency Recycling Market Development Group, Ohio Statewide Environmental Network).

KEY AREA 2: Guidelines for best practices

Objective 2: Guidelines will be developed outlining best practices in Ohio's environmental education programs, based on proven methods and research findings.

Action Item ▶ **2.1 Establish an ad hoc committee to coordinate efforts in creating and promoting guidelines for best practices in environmental education in Ohio.**

Description

The Ohio Environmental Education Center will establish an ad hoc Environmental Education Guidelines Committee with diverse representation. The committee will coordinate efforts to create and promote guidelines for best practices in environmental education in Ohio that support lifelong learning. When developing the guidelines, the committee will review national and Ohio data, topical programs (e.g., community-based issues, environmental health) and programs sponsored by key organizations (e.g., universities, businesses, industry, government). The Research Consortium for Environmental Education will provide input to the committee during development of the guidelines. Key stakeholders will review drafts.

Important Points to Consider

- Encourage broad participation to create a balanced representation. In this way, the committee has a better chance to make sure it considers the needs of diverse institutions and formal and nonformal educators.
- When establishing guidelines, the committee should avoid trendiness but remain updated in an effort to promote broad-based, creative, and original programming.

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Action Item ▶ **2.2 Coordinate environmental education research in Ohio.**

Description

The Ohio Environmental Education Center will establish a Research Consortium for Environmental Education to facilitate, disseminate, and, when appropriate, coordinate research on environmental education in Ohio. The research will be based on the premise that the tenets of good environmental education follow the tenets of good education. The group will be charged with 1) bringing findings from relevant research to the attention of formal and nonformal educators, and 2) working with educators and communities to identify additional research needs.

Important Points to Consider

- Provide mechanisms and funds for sharing research that ensure access by all stakeholders.
- Focus must be on applied as well as theoretical research.
- Consider research findings from within the state, nationally, and internationally.
- Include practitioners in both the consortium and in the research activity.

KEY AREA 3: Outreach

Objective 3: A marketing plan will be developed to promote environmental education in Ohio and centralized access to environmental information and education resources.

Action Item ▶ **3.1 Implement a marketing plan that demonstrates the role of environmental education in enhancing environmental literacy in Ohio.**

Description

The Ohio Environmental Education Center will develop a comprehensive plan to educate key audiences (e.g., civic and business leaders, educators, parents) about environmental education, including its status and role in Ohio. The Ohio EE 2000 Plan, as well as examples of successful programs from around the state, will be highlighted using a variety of media.

Important Points to Consider

- Use print and non-print media (e.g., press releases, public service announcements, electronic media).
- Present a broad working definition of environmental education as it applies to Ohio citizens.

Action Item ▶ **3.2 Improve centralized access to environmental information and environmental education resources.**

Description	Important Points to Consider
The **Ohio Environmental Education Center** will help to connect audiences with the resources they need and foster communication among groups. Methods might include a web site, hotline, and teleconferencing.	• Draw together a wide variety of information sources (e.g., clearinghouses, schools, nonformal education, universities, agencies, businesses, non-profit organizations) to provide a "one-stop-shop." • Create a mechanism for regularly updating information. • Include computer, broadcast, interpersonal, and print media. • Be sure to include programs developed through Ohio EE 2000 as well as others.

KEY AREA 4: Training and professional development

Objective 4: Programs to assist people in becoming effective environmental educators will be put in place.

Action Item ▶ **4.1 Determine the current amount of environmental education provided in preservice teacher education programs and establish a system for periodic assessment.**

Description	Important Points to Consider
The **Ohio Environmental Education Center** will assess the content and amount of environmental education in teacher education programs at Ohio's colleges and universities by developing surveys to be distributed periodically.	• Surveys should take into consideration the broad and varied definitions of environmental education, as they relate to preservice education, to ensure that the data is complete.

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Action Item ▶ **4.2 Promote environmental education as a component of all teacher education programs.**

Description

Based on the results of the surveys, the **Ohio Environmental Education Center** will create a mechanism that brings together university faculty and others to determine the most effective strategies to ensure that environmental education is an integral part of all preservice teacher education programs. The center will promote these strategies to appropriate teacher education faculty at colleges and universities.

Important Points to Consider

- Include student teaching opportunities at nonformal environmental education sites.
- Encourage state licensure requirements to include an environmental education component.
- Make sure current teachers are part of the process.
- Ensure that accurate content and process are part of the program.

Action Item ▶ **4.3 Provide environmental education training and coursework for nonformal educators and volunteers.**

Description

The **Ohio Environmental Education Center** will collaborate with others to offer varied opportunities to educators who work in nonformal settings (e.g., training programs, EE courses, degree programs). These opportunities will provide nonformal educators with the background and skills they need to interact effectively with the formal education community and will enable them to provide appropriate and effective environmental education programming to the community at large.

Important Points to Consider

- Offer training at nonformal education sites as well as at colleges and universities.
- Consider allowing volunteers to attend training programs at a reduced rate.

Action Item ▶ **4.4 Develop guidelines leading to an environmental education endorsement for all PreK-12 teachers.**

Description

Using existing guidelines, such as those from the North American Association of Environmental Education, and input from formal and nonformal education, **the Ohio Environmental Education Center** will convene a group to develop guidelines to lead to an optional endorsement for PreK-12 teachers.

Important Points to Consider

- Integrate an endorsement with current licensure requirements.
- Consider endorsement reciprocity with other states.
- Must be adopted by the State Board of Education to be effective.
- "Grandfather" those who are already actively working in the field and meet the basic qualifications.
- Establish "incentives" for seeking this endorsement.
- Consider potential ties to Local Professional Development Committees (LPDCs).

Action Item ▶ **4.5 Create the opportunity for nonformal educators to receive an optional endorsement in environmental education.**

Description

Using the environmental education endorsement guidelines developed for formal educators as a foundation, **the Ohio Environmental Education Center** will ask a coalition of nonformal educators to develop a similar set of guidelines that takes into account the unique nature of education in the nonformal setting. Upon fulfillment of these requirements, educators in nonformal settings could use this designation as a benchmark of quality.

Important Points to Consider

- Consider ways to "grandfather" experienced educators with minimal coursework and inconvenience.
- Consider endorsement reciprocity with other states.
- Establish "incentives" for seeking this endorsement.
- Ensure that nonformal educators from diverse arenas are part of the development process.

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Action Item ▶ **4.6 Make environmental education opportunities readily available to inservice teachers and administrators throughout the state.**

Description

The **Ohio Environmental Education Center** will develop strategies to connect school districts with local, regional, and state environmental education programs to assure that environmental education opportunities are available. These inservice programs should focus on both the content and process of good environmental education, and should encourage the use of the outdoor environment.

Important Points to Consider

- Consider supplemental funding to encourage teacher participation.
- Establish opportunities that will be readily available and acceptable to LPDCs.
- Create Internet opportunities that would expand availability.
- Offer inservice opportunities at a variety of sites and with various professional development providers, including schools, Regional Professional Development Centers (RPDCs), local environmental education centers, and universities.
- Promote inservice education with individual schools and in schoolyards.
- Create long-term inservice opportunities, not just "one-shot" workshops.

KEY AREA 5: Diversity

Objective 5: Programs, services, and facilities will be accessible and affordable to diverse audiences in Ohio.

Action Item ▶ **5.1 Develop a set of inquiry investigations for PreK-12 learners that focuses on real-life, first-hand, community-based environmental issues.**

Description

The **Steering Committee** will establish a group to develop a series of inquiry-based experiences for learners to investigate real-life environmental problems, taking into account a range of grade levels and different learner populations.

Important Points to Consider

- Evaluate existing Ohio, national, and international resources.
- Consider using *Integrating Environmental Education and Science* as a model or example.
- Determine what additional educational experiences are needed most (e.g., activities for high school audience; activities to build a sense of wonder).
- Be sure the inquiry investigations support current educational requirements (e.g., proficiency tests).
- Produce materials for local educators to use or adapt, along with appropriate professional development opportunities.

Action Item ▶ **5.2 Produce a model curriculum for Ohio that demonstrates how to develop educational programs using the Environment as an Integrating Context for learning (EIC).**

Description

The model curriculum will provide both the EIC philosophical basis and practical, hands-on strategies educators need to implement comprehensive educational programs for PreK-12 learners. The developers of the curriculum, convened by the **Steering Committee,** may use case studies of schools or classrooms that already use this thematic approach to demonstrate the model in practice.

Important Points to Consider

- Evaluate existing programs, primarily in Ohio, that use the EIC approach.
- Develop the model based upon lessons learned from existing programs.
- Emphasize real-life, first-hand, community-based experiences.
- Document how the EIC model fits with educational reform, accountability, and other Ohio model programs.
- Produce multimedia materials that describe and promote the model.
- Promote widely to gain acceptance.
- Provide ongoing support including consultation, professional development, and additional logistical assistance.

Action Item ▶ **5.3 Develop a mentoring program that is accessible and affordable to allow all youth to experience a variety of environmental occupations.**

Description

The **Steering Committee** will convene a team to establish a program to increase youths' awareness of a full range of environment-related careers, provide shadowing opportunities to experience first-hand what environmental professionals do, and mentor selected youth who express an interest in pursuing an environmental career.

Important Points to Consider

- Establish a network that helps schools, youth programs and individuals connect with local organizations and environmental professionals willing to participate in a mentoring program.
- Through the network, identify a full range of environmental careers along with potential organizations and professionals willing to work with schools to mentor students.
- Provide materials and/or other services that promote environment-related careers.

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Action Item ▶ **5.4 Develop a statewide initiative that helps educators better understand and meet the needs of underserved audiences of all ages.**

Description

Building upon lessons learned from successful programs, the **Steering Committee** will bring together a group of practitioners to modify current methods and materials to assist educators in better meeting the needs of underserved audiences.

Important Points to Consider

- Identify underserved audiences.
- Identify formal, nonformal, and adult education programs that are successfully reaching underserved audiences.
- Determine what makes these programs successful (e.g., methods, topics, lessons learned, marketing).
- Identify the means of adapting existing and developing future programs based upon these successes.
- Provide workshops and other professional development opportunities to implement these programs.

Action Item ▶ **5.5 Incorporate environmental education into early childhood experiences by identifying and strengthening existing networks.**

Description

The **Steering Committee** will tap into existing networks associated with early childhood programs to encourage environmental education in preschool and primary grades. A two-pronged approach will be used: 1) early childhood networks will be encouraged to promote environmental education, especially through hands-on, outdoor experiences; and 2) environmental education networks will be encouraged to include the early childhood audience in their efforts. Both statewide and regional networks will be included in the process.

Important Points to Consider

- Use diverse strategies to reach these networks (e.g., newsletters, web pages, workshops, conferences).
- Include both educators and parents.
- Use existing materials, including *Integrating Environmental Education and Science* and *Fostering a Sense of Wonder During the Early Childhood Years*.

Action Item ▶ **5.6 Foster positive outdoor and indoor nature experiences for young children by providing parents and educators with age-appropriate environmental education activities.**

Description

A group appointed by the **Steering Committee** will amass a user-friendly collection of activities for early childhood that incorporates existing resources to distribute to educators and parents. Activities will promote inquiry about the natural world and address how to sustain and encourage a sense of wonder.

Important Points to Consider

- Draw upon existing materials, including *Integrating Environmental Education and Science* and *Fostering a Sense of Wonder During the Early Childhood Years.*
- Assure that all areas of the curriculum are addressed.
- Include activities that can be used in urban settings.

Action Item ▶ **5.7 Implement strategies for enhancing environmental literacy of all Ohioans.**

Description

The **Steering Committee** will organize a team to develop a broad-based plan to raise Ohioans' awareness of environmental concepts and issues. Key components will include a description of Ohio's environment; core concepts of environmental science, economics, and policy; and the importance of informed decision-making. The plan will target the general public and especially individuals whose jobs involve environmental issues and information (e.g., community leaders, journalists).

Important Points to Consider

- Develop an adult environmental education curriculum to be offered for continuing education.
- Use OSU Extension resources.
- Present programs for community leaders on topics such as sustainable development.
- Offer seminars specifically for journalists.

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5.8 Promote the continuation of existing environmental education programs, and the creation of new ones, for the general public in local communities.

Action Item

Description

The **Steering Committee** will collaborate with grassroots groups to work to meet individual localities' needs by building upon existing community programs and by creating new programs. Program providers may include local nonprofit organizations, colleges and universities, local community groups, and others.

Important Points to Consider

- Identify and help promote existing sites and programs.
- Develop a marketing strategy to attract targeted audiences, especially adults and families.
- Draw upon local leadership to address local characteristics and needs.
- Connect with existing adult education programs in community centers.

5.9 Identify environmental education centers in the state and create or encourage creation of centers in areas where they do not currently exist.

Action Item

Description

Environmental education centers provide a wide variety of quality environmental education resources for learners of all ages. These centers, both day-use and resident, should provide comfortable, ecologically appropriate facilities on a regional basis. The **Steering Committee** will identify existing centers, explore how they can be expanded upon, and determine what others may need to be developed.

Important Points to Consider

- Provide guidelines for centers.
- Develop marketing strategies to promote centers.
- Demonstrate environmental stewardship.
- Provide activities and/or displays for a better understanding of the natural world and our place in it.

KEY AREA 6: Support

Objective 6: A unified, active constituency will build bipartisan political support for environmental education.

Action Item ▶ 6.1 Convene a team to create a mechanism to have environmental education officially recognized, sanctioned, and supported by the state legislature.

Description

The **Steering Committee** will convene a team to develop a marketing plan to contact Ohio legislators and educate them about environmental education programs. This team will work with legislators and their staff to identify legislative opportunities to support environmental education programs.

Important Points to Consider

- Include representatives on the team from groups that currently work directly with the legislature.
- Explore the most appropriate way to approach legislators.
- Use grassroots support to further this initiative.
- Use a variety of approaches to engage legislators and their staff in environmental education programs (e.g., site visits, canoe trips, hikes, testimonials from their districts).

KEY AREA 7: Funding

Objective 7: Sustainable funding sources will be developed and maintained.

Action Item ▶ 7.1 Examine the current scope, distribution and support of environmental education programs.

Description

The **Ohio Environmental Education Center** will convene a team to evaluate the equity of distribution, both geographically and demographically, of environmental education programs. The team will identify areas and audiences in need of additional support.

Important Points to Consider

- Compose the team from different groups, with a balance of funders and researchers.
- Use the *Directory of Ohio Environmental Education Sites and Resources* as a starting point.
- Use the *GreenLink* web site as a resource.
- Use surveys and interviews to gather information.

Action Item ▶ **7.2 Ensure adequate funding from existing and new sources for state, regional, and community-based programs.**

Description

The **Steering Committee** will collaborate with others to review sources of funding and funding mechanisms and develop new ones if necessary. Possible new mechanisms include an environmental education trust fund, partnerships with other funding organizations, and license plate funds.

Important Points to Consider

- Use a variety of resources (e.g., Internet, print materials) to identify corporate, public, and philanthropic funding sources.
- Seek local input.
- Build a sense of cooperation rather than competition among programs as new sources of funding are developed.
- Work to sustain good programs.

Next Steps

A **Transition Team** has been formed, representing diverse interests and including several members of the Ohio EE 2000 Guidance Team. The purpose of this team is to see that materials generated during the planning process are organized for distribution to organizations who could carry out the Action Items and, in this way, determine which Action Items can be initiated without new funding. This team is also making contacts with several potential funders for support of implementation of the plan.

Ongoing **Transition Team** activities include writing proposals to funders to implement other Action Items and identifying a qualified existing organization to act as fiscal agent for funds received. It is not intended that the Steering Committee or the Ohio Environmental Education Center, as identified in the Ohio EE 2000 Plan, become a separate 501(c)(3) organization.

The **Transition Team** will create a process for selecting members of a **Steering Committee** to implement the Ohio EE 2000 Plan. The Guidance Team and Strategic Planning Team will be disbanded and/or merged into the **Steering Committee**.

The work of the implementation of this plan now belongs to the citizens of Ohio, under the leadership of the **Steering Committee**. The initial **Steering Committee** tasks will be to agree on procedural matters such as the frequency of meetings, election of a chairperson, and other operational issues. The committee also will write a job description for the director of the newly created Ohio Environmental Education Center, brainstorm an initial set of organizations that might host the center's office, and develop a process for contacting organizations to determine their interest in serving as a host.

After looking over the Ohio EE 2000 Plan, the **Steering Committee** will review which Action Items it will oversee, which will be overseen by the Ohio Environmental Education Center, and which process will be used to assign Action Items to organizations. From this point on, the **Steering Committee** will determine the status of funding proposals and continue to develop leads or strategies as needed to help the funding process.

This plan will be evaluated as to its implementation and effectiveness in the year 2005.

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///// Appendix A

Environmental Education Defined

Environmental education is the combination of teaching and learning processes designed to develop a citizenry that is:

- **Knowledgeable** of the biophysical and sociocultural environments of which it is a part.
- **Aware** of environmental issues and problems, as well as various management strategies that reduce negative impacts of such issues and problems.
- **Motivated** to work toward the maintenance of diverse environments that are optimum for life and living.

Environmental education includes learning processes involved in developing *perception, awareness,* and *scientific understanding* of the natural and human-built environment; the cultivation of *beliefs* and *attitudes* that value various environments; the development of skills to identify and address environmental and ecological issues; and *participation* in environmental decision-making and actions that result in ecologically healthy and sustainable living environments at the local, national, and global levels.

A commonly held goal of environmental education is stated in the Belgrade Charter of 1975:

> *"...to develop a world population that is aware of, and concerned about, the environment and its associated problems and, which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones."*

Attributes common to environmental education emphasize problem-solving processes; critical thinking in relation to complex issues; the need to interrelate knowledge, attitudes, and skills; and the exploration of options as part of decision-making. It requires transdisciplinary thinking based on a solid foundation of disciplinary knowledge (the sciences, mathematics, language, the arts, and humanities). Settings in which environmental education can take place range from formal academic classrooms, to nonformal organization or groups experience, to informal home living room, media-oriented or recreational experience.

///// Appendix B

Explanation of Ohio EE 2000 Organizational Structure

Environmental Education Steering Committee

The Ohio EE 2000 Transition Team (an outgrowth of the current Guidance Team) will establish the Steering Committee (action item 1.1). The Steering Committee will assure that the Ohio EE 2000 Plan is implemented. It will have three primary functions:

1. Establish and oversee the Ohio Environmental Education Center (action item 1.2). This will involve serving as a governance board for policy, procedure and personnel matters; assisting with acquiring funding and support for the center and specific programs; and performing other functions that will assure implementation of the plan.

2. Determine the person/organization in the state who will take the lead on key programs and initiatives not under the leadership of the center and following up with these program managers to see that projects are completed. This involves action items 5.1–5.9 (programs, services and facilities for diverse audiences), 6.1 (legislative support for EE), and 7.2 (adequate funding). The Steering Committee will use various strategies, depending on the task, to assign leadership (e.g., ask a specific organization or individual, call for RFP, form partnership). The Steering Committee will maintain two-way communication to keep informed, encourage progress, assist as appropriate (e.g., advice, updates on related matters), and assure that information about programs reaches the center and the public.

3. Serve as a conduit, encouraging information flow and networking among the center, the Interagency Council on Environmental Education, and the program initiatives overseen by the Steering Committee.

Ohio Environmental Education Center

The Steering Committee will establish and oversee the Ohio Environmental Education Center. The concept of a "center" is more of a function rather than a place or location. Its purpose will be to promote collaboration, networking, information exchange, and program development. A major thrust of its work will be to coordinate programs and initiatives that involve statewide coordination, promotion, and infrastructure. It will have the following overarching functions:

1. Develop guidelines and training/professional development programs aimed at improving formal and nonformal environmental education in Ohio. This will involve action items 2.1 (guidelines for

best practices) and 4.1–4.6 (guidelines and professional development opportunities for preservice, inservice, and nonformal educators).

2. Promote research and evaluation by disseminating findings, identifying additional areas of needs, encouraging further research and evaluation, and recommending new program initiatives that support research findings. This will involve action items 2.2 (Research Consortium for EE) and 7.1 (evaluation of equity of EE support).

3. Develop strategies for promoting environmental literacy. This will involve action items 3.1 (increase awareness of EE) and 3.2 (increase access to environmental information and EE resources).

Ohio Interagency Council on Environmental Education

The Steering Committee will ask one state agency to take the lead on re-instituting the Ohio Interagency Council on Environmental Education (action item 1.3). This agency would contact all appropriate state agencies with an interest in the environment and/or education and ask for a representative to serve on this council. This council would facilitate exchange of information among state agencies and

///// Appendix C

Key Terms

Early childhood (Action Item 5.5) Refers to children between birth and kindergarten, although the range is sometimes considered to go up to eight years old.

EIC (Action Item 5.2) Environment as the Integrating Context for learning is a framework for interdisciplinary, collaborative, student-centered, hands-on, and engaged learning. It employs natural and socio-cultural environments as the context for learning while taking into account the "best practices" of successful educators.

Endorsement (Action Item 4.4) A means of signifying a person's grasp of environmental education concepts and his or her ability to pass these along to others, reflecting established guidelines.

Environmental literacy (Action Item 3.1) An understanding of basic principles of ecology, sociology, and economics; the interconnection of all parts of the environment; the environmental and social costs and benefits of consumer decisions; sources of energy, the improving of energy efficiency, and the relationships between energy use and lifestyles; the implications of economic and population trends; the impacts of personal lifestyles and personal choices; the importance of acting in a sustainable and constructive manner to protect the quality and diversity of the natural world.

Formal and nonformal (Objective 4) Formal refers to educational experiences provided in preschool through twelfth grade and college classroom-based experiences; nonformal refers to all other venues for education, generally thought of as environmental education centers, nature museums, non-profit organizations, etc. Programs may be residential (overnight) or may be one day or less in duration.

"Grandfather" (Action Items 4.4 - 4.5) A legally supported understanding that, despite a law enacted addressing certain situations, those same situations occurring and/or initiated at an earlier time would be exempt from the new law.

Inquiry-based experiences (Action Item 5.1) Environmental issues are examined by students using hands-on investigations and experimentation and focus on both thinking skills and science content.

Inservice (Action Item 4.6) Professional development provided with teachers to further their personal education or to develop an understanding of new programs, trends, and practices.

Local Professional Development Committees (RPDCs) (Action Items 4.4, 4.6) As defined by the Ohio Department of Education, LPDCs are set up within individual school districts to oversee professional development for teachers in their districts.

Marketing plan (Action Item 3.1) An overarching set of strategies developed to educate particular audiences about environmental education.

Model curriculum (Action Item 5.2) A curriculum that demonstrates an exemplary paradigm for anyone interested in promoting/teaching environmental education.

Regional Professional Development Centers (RPDCs) (Action Item 4.6) Centers established by the Ohio Department of Education to serve as a provider of and clearinghouses for professional development opportunities for educators and school districts in their regions.

Underserved (Action Item 5.4) A segment of the population that traditionally does not receive the benefit of environmental educational opportunities. Examples would be inner city youth and adults, the elderly, people with disabilities, the rural poor, etc.

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